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CURRENT SUPPORT BRIEF

THE ROLE OF THE KURSK MAGNETIC ANOMALY
IN THE DEVELOPMENT OF THE SOVIET FIFTH METALLURGICAL BASE

OFFICE OF RESEARCH AND REPORTS

CENTRAL INTELLIGENCE AGENCY

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THE ROLE OF THE KURSK MAGNETIC ANOMALY
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The expansion of ferrous metallurgy currently underway in the Central-European region of the USSR was recognized at the 22nd Party Congress when Premier Khrushchev included the region, for the first time, among the nation's important metallurgical bases of the future. ^{1/} The region is designated the fifth metallurgical base; the other bases are the Ukraine SSR and the Urals, which account for about 73 percent of the total output of crude steel, and those being developed or planned in Kazakhstan and in Siberia and the Far East. Designation by the congress of the new base is acknowledgement of the importance attached to plans for increasing steelmaking capacity in the heavily industrialized central part of the USSR. It also reflects the significance of long-term plans for developing the vast deposits of iron ore at the Kursk Magnetic Anomaly (KMA).

Production at the KMA, said to contain the world's largest deposits of high grade iron ore, amounted to less than 1 million tons in 1958, increased to 3.9 million tons in 1960, and is planned at 12.3 million tons in 1965.* ^{2/} Production at the KMA was less than 3 percent of the Soviet total in 1960, and is expected to be about 7 percent in 1965. ^{3/} Such an expansion in iron ore production would amply support the increase in steel production indicated for the central region, from about 3 million tons in 1958 to perhaps 10 to 12 million tons or more in 1965.** Present plans envisage shipments of about 2.6 million tons of iron ore to steel plants in the Ukraine in 1965. ^{4/} The planned level of production in 1980--over 60 million tons or about 15 percent of total Soviet output--would far exceed the requirements of the central region, providing a sizable surplus for shipment to other steel producing areas and/or to the European Satellite countries.

The Kursk deposits, located approximately 300 miles southwest of Moscow, are said to contain 5.6 billion tons of high grade ore with an iron content of 53 to 61 percent and 5.8 billion tons of ferrous quartzites containing 30 to 40 percent iron. ^{5/} The production goals for 1965 and beyond are based largely on the development of the high grade ore deposits. Quartzites currently are processed at two facilities, the Gubkin and Yuzhno-Korobkovskiy combines, whose combined output is planned to increase from the 1.1 million tons of concentrates produced in 1960 to 1.3 million tons in 1965. These facilities are to be discontinued after 1965 which is a reflection of the high cost of the concentrates as compared with the expected costs of rich ore--8.5 to 10.10 rubles per ton as against estimates of 1.3 to 2.9 rubles per ton for high grade ore. ^{6/}

Exploitation of the deposits of high grade ore began in 1959. Two such mines, the Lebedinskiy and Mikhaylovskiy, are currently in operation and in 1960 produced a total of 1.8 million tons of usable ore. ^{7/} Their production in 1965 is planned at 9.6 million tons or

* Production figures are given in metric tons of usable ore (shipping grade and concentrates).

** The Cherepovets Metallurgical Plant is also located within the boundaries of the fifth metallurgical base but will not be supplied with iron ore from the KMA. For this reason, the planned production of crude steel for this plant in 1965 (3.5 to 4 million tons) is not included above.

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about 78 percent of the total output expected at KMA in that year. A third high grade ore mine, Stoylenskiy, is to be in operation by 1965 with an annual production in that year of 1.4 million tons. The aggregate capacity of these three mines is planned to increase to 18.6 million tons by 1980. In addition to these mines, about 45 million tons of new usable ore capacity are to be constructed during 1966-80, over one-half of which will be provided by the Yakovlevskiy mine. 8/ The aggregate productive investment required by current plans for developing the KMA during 1959-80 has been estimated by the Soviets at 1.4 to 1.5 billion rubles. 9/

Realization of the Seven Year Plan goals for the KMA largely hinges upon the progress made at the Mikhaylovskiy mine in the next four years, and to a lesser extent upon the successful completion of the Stoylenskiy mine now under construction. While indications for the commissioning of the Stoylenskiy mine are favorable, there is some doubt that the Mikhaylovskiy mine will achieve its capacity planned for 1965. This mine produced only 228,000 tons of iron ore in 1960, 500,000 tons less than the plan for that year, and the available evidence points to underfulfillment in 1961 as well. Operations at the Gubkin, Yuzhno-Korobkovskiy, and Lebedinskiy mines are proceeding on schedule.

There are major problems that must be overcome if production at the KMA is to attain the levels anticipated for 1965. The development of the important Mikhaylovskiy mine, for example, has fallen behind schedule thus far in the plan period partially due to lags in deliveries of equipment, inefficiencies in transportation, and poor coordination between planning and operating agencies. 10/ Assuming that these deficiencies can be corrected, there are basic technical difficulties presented by unfavorable ground water conditions that must be dealt with at the Mikhaylovskiy, Lebedinskiy and other mines. 11/ While the Soviets claim that the seepage problem has largely been solved, pointing to the fact that the Mikhaylovskiy and Lebedinskiy mines are currently in operation, the continued existence of a water problem--particularly at Mikhaylovskiy--is reflected in operating costs and lags in production. At the underground Yakovlevskiy mine, excessive seepage and the problem of freezing the deep beds to permit drilling have yet to be solved, leaving little doubt that this important project will not be commissioned by 1965 as originally planned.

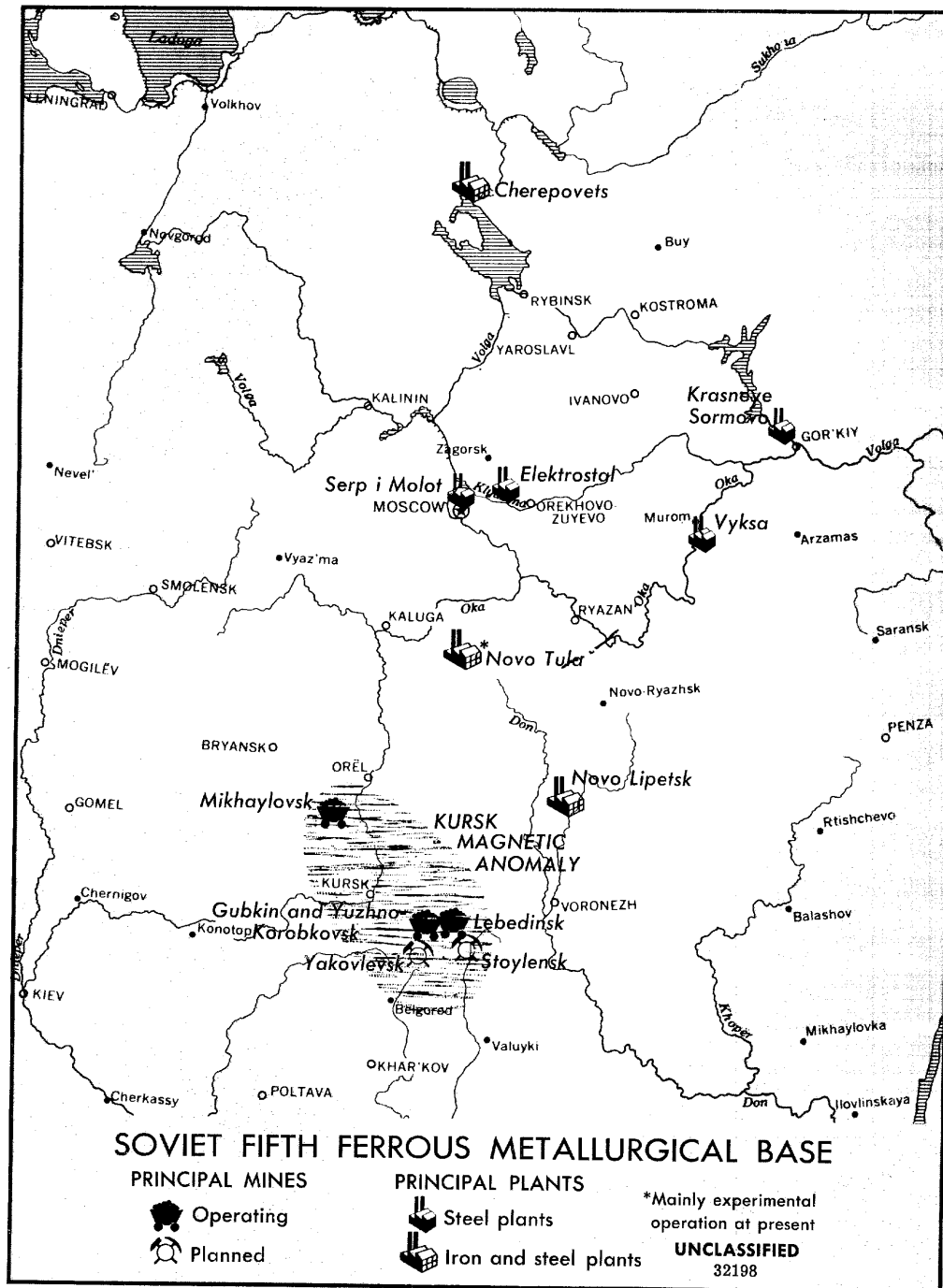
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